

REMARKS

The Applicants are filing this Amendment and Response and an accompanying RCE in response to a Final Official Action dated May 29, 2007. At the time of the Final Official Action, claims 1-20 were pending. In this response, claims 1, 8, 14, and 15 are amended, and claims 2, 3, 9, 10, 16, 17, and 20 are cancelled. Accordingly, claims 1, 4-8, 11-15, 18 and 19 are currently pending.

Objections to the Drawings

In the Final Office Action, the Examiner objected to the drawings under 37 C.F.R. §1.83(b). Specifically, the Examiner stated, “The drawings are incomplete as they do not illustrate a method as described in claims 8-13 and the computer readable medium as described in claim 20.” Final Office Action, page 3. Applicants respectfully traverse this objection.

Although the Applicants do not concede the correctness of the objection, claim 20 has been cancelled, to further prosecution of the case. As such, Applicants respectfully assert that the objection with respect to claim 20 is moot and request for withdrawal of the objection to the drawings with respect to claim 20.

With respect to claims 8-13, Applicants respectfully assert that the Examiner is misapplying the rules in making the objection. In objecting to the figures, the Examiner cites to 37 C.F.R. §1.83(b), which states:

When the invention consists of an improvement on an old *machine* the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old *structure*, and

also in another view, so much only of the old *structure* as will suffice to show the connection of the invention therewith.

37 C.F.R. §1.83(b) (emphasis added). As can be seen, 37 C.F.R. §1.83(b) is directed to *machines and structures*. In sharp contrast, claim 8 is directed to a method and, as such, this sub-section does not apply to claims 8-13. Indeed, it is unclear how the cited section has any bearing whatsoever on the objected figures in view of the claims.

Additionally, drawings in a patent application are included to facilitate an understanding of the subject matter sought to be patented. *See* 37 C.F.R. §1.81(a)-(b). The drawings may include illustrations which *facilitate an understanding of the invention* (for example flow sheets in cases of processes). 37 C.F.R. §1.81(b) (emphasis added). Conventional features disclosed in the description and the claims, where their detailed illustration is not essential for a proper understanding of the invention, should be illustrated in the drawing in the form of a graphical drawing symbol or a labeled representation (*e.g.*, a labeled rectangular box). 37 C.F.R. §1.83(a). As such, flow charts and block diagrams may be used to illustrate the subject matter sought to be patented with a view towards facilitating the understanding of the subject matter sought to be patented.

In view of the foregoing, Applicants respectfully assert that the current figures illustrate the method of claims 8-13 and meet the above-stated objectives of facilitating an understanding of the subject matter sought to be protected. Specifically, with respect to independent claim 8, the figures illustrate a method comprising the acts of: “creating a pre-whitened signal by applying a pre-whitening data to a received signal;” (FIG. 2, block 56 “Pre-

Whitening Matrix P_x "). Additionally, the figures illustrate "detecting a pattern that corresponds to a request for access in the pre-whitened signal; (FIG. 2, block 58 "Code Matched Filter (CMF)"), and "computing correlation data corresponding to the pattern;" (FIG. 2, block 60 "Correlation Matrix"). Furthermore, the figures illustrate "determining whether the correlation data exceeds a threshold;" (FIG. 2, block 66 "Max Eigenvalue > Threshold?"), "and indicating that an acknowledgement signal should be transmitted if the threshold is exceeded." (FIG. 2, block 60 "Correlation Matrix").

For at least the above-stated reasons, Applicants respectfully request withdrawal of the objection to the figures under 37 C.F.R. §1.83(b).

The Rejections Under 35 U.S.C. § 103

The Examiner rejected claims 1, 4, 8, 11 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Blanchard et al. (U.S. Patent No. 5,764,690, hereafter "Blanchard") in view of Nakada (U.S. Pub. No. 2004/0077357, hereafter "Nakada") and Davis et al. (U.S. Patent No. 6,771,723, hereafter "Davis"); rejected claims 2, 3, 9 and 10 as being unpatentable over Blanchard, Nakada and Davis, as applied to claims 1 and 8 above, and further in view of Maeda (U.S. Patent No. 4,926,491, hereafter "Maeda"); rejected claims 5 and 12 as being unpatentable over Blanchard, Nakada and Davis as applied to claims 1 and 8 above, and further in view of Agee et al. (U.S. Pub. No. 2004/0095907, hereafter "Agee"); rejected claim 6 as being unpatentable over Blanchard, Nakada and Davis applied to claim 1 above, and further in view of Hudson (U.S. Pub. No. 2001/0033614, hereafter "Hudson");

rejected claims 7 and 13 as being unpatentable over Blanchard, Nakada and Davis as applied to claims 1 and 8 above, and further in view of Shah et al. (U.S. Pub. No. 2006/0109779, hereinafter “Shah”). Additionally, the Examiner rejected claims 15 and 18 as being unpatentable over Blanchard in view of Nakada, Davis and Li et al. (U.S. Patent No. 7,068,628, hereinafter “Li”); rejected claims 16 and 17 as being unpatentable over Blanchard, Nakada, Davis and Li as applied to claim 15 above, and further in view of Maeda; rejected claim 19 as being unpatentable over Blanchard, Nakada, Davis and Li as applied to claim 15 above, and further in view of Shah; and rejected claim 20 as being unpatentable over Blanchard in view of Nakada, Davis and Hudson. Applicants respectfully traverse these rejections.

As a preliminary matter, independent claim 20 has been cancelled. Accordingly, Applicants respectfully assert that the rejection of claim 20 is moot and, therefore, request withdrawal of the rejection of claim 20.

Legal Precedent

The Applicants respectfully traverse these rejections. The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). In addressing obviousness determinations under 35 U.S.C. § 103, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), reaffirmed many of its precedents relating to obviousness including its holding in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In *KSR*, the Court also reaffirmed that “a patent composed

of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art.” *Id.* at 14. In this regard, the *KSR* court stated that “it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does ... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known.” *Id.* at 14-15. In *KSR*, the court noted that the demonstration of a teaching, suggestion, or motivation to combine provides a “helpful insight” in determining whether claimed subject matter is obvious. *KSR, slip op.* at 14.

Furthermore, the *KSR* court did not diminish the requirement for objective evidence of obviousness. *Id.* at 14 (“To facilitate review, this analysis should be made explicit. See *In re Kahn*, 441 F.3d 977, 988 (CA Fed. 2006) (“[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness”). As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”); see also, *In re Lee*, 61 U.S.P.Q.2d 1430, 1436 (Fed. Cir. 2002) (holding that the factual inquiry whether to combine references must be thorough and searching, and that it must be based on *objective evidence of record*).

As noted above, Applicants have amended the claims to clarify certain features. In particular, Applicants have amended claims 1, 8, 14 and 15 to recite subject matter that was previously included in claims 2 and 3. As such, claims 1, 8, 14 and 15 recite “wherein computing correlation data comprises computing a correlation matrix and a *maximum eigenvalue*.” (Emphasis added). The amended claims also recite comparing the maximum eigenvalue to a threshold.

In sharp contrast, none of the cited references discloses the above-mentioned subject matter. Specifically, in the Office Action, the Examiner admitted that the Blanchard reference fails to disclose the correlation data comprising a correlation matrix and at least one detector being adapted to compute at least one maximum eigenvalue of the correlation matrix. *See* Office Action, page 5. Applicants agree with the Examiner in this regard and further assert that the Nakada and Davis references fail to cure the deficiencies of the Blanchard reference in this regard. In particular, neither the Nakada nor the Davis references even mention the term eigenvalue, much less determining an eigenvalue and comparing it with a threshold. As such, the Blanchard, Nakada and Davis references, taken alone or in hypothetical combination, fail to disclose all the features of the independent claims 1, 8, 14 and 15.

However, in the Office Action, the Examiner asserted that the Maeda reference discloses a detector configured to compute a *maximum eigenvalue*. Applicants respectfully disagree with this assertion. The Maeda reference is directed to a pattern recognition device configured to learn a reference pattern vector using pause periods in the recognition processing. *See* Maeda,

abstract. The portion of the Maeda reference referenced by the Examiner simply discloses calculating an eigenvalue, not *a maximum eigenvalue*, as set forth in the claims. In its entirety, the referenced portion states:

As described in the above, it becomes possible to obtain an updated reference pattern vector by solving the eigenvalue problem for the correlation matrix.

Maeda, col. 8, lines 32-35. As can be seen, the cited portion does not disclose computing a maximum eigenvalue. Indeed, Applicants have reviewed the Maeda reference and are unable to find anything that can reasonably be described as a maximum eigenvalue. As such, Applicants assert that the Maeda reference fails to disclose computing a maximum eigenvalue, much less computing the maximum eigenvalue and comparing it to a threshold, as set forth in claims 1, 8, 14 and 15.

Accordingly, the Blanchard, Nakada, Davis and Maeda references, taken alone or in hypothetical combination, fail to disclose all the features of the independent claims 1, 8, 14 and 15. As such, Applicants respectfully request withdrawal of the Section 103 rejection of claims 1, 8, 14 and 15, as well as all claims depending therefrom, and allowance of the same.

Furthermore, Applicants are unaware of, and the Examiner has not cited to, any portion of any of the other cited references that can reasonably be construed as disclosing, teaching or suggesting computing a maximum eigenvalue and comparing a maximum eigenvalue to a threshold. In particular, the Applicants respectfully assert that the Hudson, Shah and Li references, taken alone or in hypothetical combination, fail to cure the deficiencies of the

Blanchard, Nakada, Davis and Maeda references with respect to the independent claims 1, 8, 14 and 15. Accordingly, Applicants respectfully request withdrawal of all the Section 103 rejections and allowance of all the pending claims.

Claim Rejections Under 35 U.S.C. § 112

In the Final Office Action, the Examiner rejected claims 1-20 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. More specifically, the Examiner stated:

The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The limitation added to independent claims 1, 8, 14, 15, and 20 of “pre-whitening request threshold” is not found in the specification. Although pre-whitening and threshold descriptions are found in the specification, these limitations were previously found in the claims and it is unclear to the examiner how a “pre-whitening request threshold” differs from the previously claimed threshold.

Final Office Action, page 12. Applicants have amended claims 1, 8, 14, and 16 from “pre-whitening request threshold” to “threshold.” Applicants respectfully assert that the “threshold” is fully supported by the specification and, as such, request withdrawal of the rejection of the claims under Section 112.

Claim Objections

In the Final Office Action, the Examiner objected to claim 8. Specifically, the Examiner stated, “Claim 8 is objected based on the following informalities: Claim 8, line 2, the *acts* should

be changed to *steps*. Appropriate correction is required.” Final Office Action, page 13, (emphasis in original). Applicants respectfully traverse the objection.

In describing the expression of elements in claims, 35 U.S.C. § 112 uses permissive language. Specifically, it states: “An element in a claim for a combination *may be* expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or *acts* described in the specification and equivalents thereof. 35 U.S.C. § 112 (emphasis added). It may be inferred from the language that the statute clearly allows for terms other than means or steps to be used. Specifically, for example, the statute may be read to say claims *may be* expressed as a means, steps, *or acts* to cover *acts* disclosed in the specification.

Applicants wish to make it clear that in referencing Section 112 and using the term “acts,” Applicants are merely pointing to statutory authority for the use of the term and not intending that the claim be narrowly construed as *only* encompassing “acts.”

Furthermore, the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, (hereinafter “Interim Guidelines”) published by the United State Patent and Trademark Office on November 22, 2005 states the following:

USPTO personnel should begin claim analysis by identifying and evaluating each claim limitation. For processes, the claim limitations will define steps or *acts* to be performed.

...

35 U.S.C. Sec. 101 defines four catagories [*sic*] of inventions that Congress deemed to be the appropriate subject matter of a

patent: processes, machines, manufactures and compositions of matter. The latter three categories define "things" or "products" while the first category defines "actions" (i.e., inventions that consist of a series of steps or *acts* to be performed). See 35 U.S.C. 100(b) ("The term 'process' means process, art, or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.").

...

A claim that requires one or more *acts* to be performed defines a process.

OG Section II(C), para. 2; Section IV(A), para. 9;
Annex II(A)(i), para. 5. (Emphasis added).

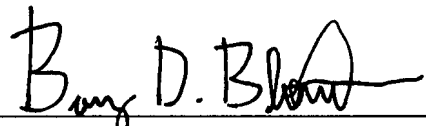
In view of the Interim Guidelines and Section 112, it is clear that the term "acts" is an entirely appropriate term used in claims. Moreover, it is a generally accepted term used to describe processes and would be understood by one of ordinary skill in the art. As such, the Examiner's objection appears to lack any statutory or administrative authority. Accordingly, Applicants respectfully request withdrawal of the objection to claim 8.

Conclusion

In view of the remarks set forth above, the Applicants respectfully request reconsideration of the Examiner's rejections and allowance of all pending claims 1-20. If the Examiner believes that a telephonic interview will help speed this application toward issuance, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

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